

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

48/Key for Line (2m)
Appeal Brief
J. Smith
3/14/03

In re Application of)
Takahisa Ueda) Art Unit: 3108
Appln. No. : 08/581,050) Ex: D. DePumpo
Filed: December 27, 1995)
For: PACKING)

BRIEF ON APPEAL

Assistant Commissioner for Patents
Washington, D.C. 20231

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Sir:

Pursuant to the provisions of 37 CFR 1.192, submitted herewith is
applicant/appellant's Brief on Appeal.

REAL PARTY IN INTEREST

Nippon Pillar Packing Co., Ltd. by assignment from the inventor, Mr. Takahisa

Ueda, dated August 27, 1991, and recorded on August 30, 1991 at Reel 5973 and Frame 0739,

hold the entire right, title and interest to this application.

03/17/2003 VROGFC 00000002 101213 08581050
01 FC:1252 410.00 CH

RELATED APPEALS AND INTERFERENCES

There are no related appeals and/or interferences with respect to this application
which are now pending.

STATUS OF CLAIMS

Claims 1, 3-11, 13, 14 and 16-29 remain withdrawn from further consideration

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under 37 CFR 1.142(b).

Claim 2 is pending and has been rejected under 35 USC 112, first paragraph and second paragraph; under 35 USC 103 as unpatentable over Ueda et al 5,134,030 in view of Ogino et al, 4,455,334; and over Case et al 4,559,862 in view of Schnitzler 4,190,257.

STATUS OF AMENDMENTS

This application is a continuation application of application No. 08/332,385, filed October 31, 1994, which is a divisional application of application No. 08/164,782, which is a divisional application of application No. 08/164,782, filed December 10, 1993, and now Patent Number 5,370,405, which is a continuation application of application No. 07/761,362.

Application 08/581,050 was refiled as continuation application (CPA) on November 28, 2000 and a further refiled as a CPA on June 14, 2001.

A Response was filed on April 29, 2002 to the Office Action of November 28, 2001.

A final rejection was issued on June 6, 2002, and a Notice of Appeal filed on November 6, 2002.

SUMMARY OF THE INVENTION

(the page and line references are to the specification)

The invention disclosed and claimed in this continuation/divisional application relates to that aspect of the invention shown in Fig. 3 (elected specie). According to this specie, the packing 1 is made in the form of a string-like member 5 made of a braided body 3A obtained by square-braiding eight internally reinforced braiding yarns 4 (page 8, lines 15-17 of the specification).

The internally reinforced braiding yarns 4 each comprise a plurality of longitudinally arranged, internally, reinforced fiber yarns 40 made of, for example, cotton, and expanded graphite 41 having a vermiform shape integrally bonded to the outer surface of the yarns 40 with adhesives. (Page 6, lines 21-25 of the specification).

The cotton yarns used as the reinforcing fiber yarns 40 have, on the outer surfaces thereof, an infinite number of extremely short and fine fibers, i.e., so-called fuzz. This improves the adhesion of the adhesives. Accordingly, the reinforcing fiber yarns 40 and the expanded graphite 41 are securely bonded to each other to prevent the expanded graphite 41 from partially falling from the reinforcing fiber yarns 40. (Page 7, lines 2-9 of the specification).

ISSUES

There are four (4) issues presented and these are based upon the four rejections made in the final rejection.

(1)

Claim 2 is finally rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(2)

Claim 2 is finally rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention

(3)

Claim 2 is rejected as unpatentable over Ueda et al in view of Ogino et al under 35 USC 103. The examiner refers us to Paper No. 17 which the final rejection of April 18, 1997.

In applying Ueda et al the Examiner suggests that:

Ueda et al '030 discloses all features including the use of expanded graphite. While Ueda does disclose that the graphite sheets and reinforcing fiber are "laminated" (which usually involves adhesive bonding), adhesives are not specifically mentioned.

He then suggests that Ogino et al:

....teaches the use of longitudinally disposed fibers which are laminated with expanded graphite sheets by adhesives for the purpose of reinforcing the graphite sheets.

(4)

Claim 2 is rejected as unpatentable over Case et al in view of Schnitzler under 35 USC 103. Again the examiner refers us to Paper No. 17.

In applying Case et al the Examiner suggests that:

Case et al discloses all features except for the use of expanded graphite. Case et al discloses a packing made of braided yarns wherein the yarns are made up of twisted or braided fibers and graphite. Case et al also discloses the use of TF binder which acts as an adhesive to bind the graphite to the fibers.

He then suggests that Schnitzler:

--- teaches the well know use of expanded graphite which is preferred for use in packings due to its mechanical properties.

GROUPING OF CLAIMS

Claim 2 is the only claim being considered on this appeal.

ARGUMENTS

(1) - (2)

Claim 2 is in full compliance with paragraphs 1 and 2 of 35 USC 112

The basis of this rejection is not the claim itself but "applicant's remarks (page 3, line 14) [the Response filed on April 29, 2002]." The amendment to claim 2 which relates to page 3, line 14 of the remarks referred to by the examiner states "spaced parallel reinforcing fiber yarns each having a surface which surface includes an adhesive." On page 2 of the noted remarks, applicant mentioned "both surfaces." This was again mentioned on page 3, as noted by the examiner. But applicant also stated on page 2, lines 13 - 15 "The reference to 'both surfaces' was changed to 'outer surface'." This latter change was made for clarity since a cylinder (the yarns 40 as shown in Fig. 2) has a continuous circumferential surface and transverse end surfaces."

Clearly, the reference to "both surfaces" was noted in error by applicant and "outer surfaces" should appear wherever "both surfaces" appear in the comments following line 15 on page 2 of the remarks.

112
Issues
142
OK?

Applicant believes that both issues (1) and (2) are in reality non-issues. The invention is understandable from the specification as originally filed. To realize the distinctions between the claimed invention and the references applied by the examiner, reference is again made to Enclosures A, B and C hereto, which were shown to the examiner at the interview on

November 8, 2000. These Enclosures were made of record with the Preliminary Amendment filed December 19, 2000. The interview was attended by the inventor Mr. Ueda. The discussion of these Enclosures is worth repeating for the purpose of this appeal.

Enclosure A shows the formation of the expanded graphite particle from a graphite flake. The expanded graphite particle takes a caterpillar-like or veriform shape. Ueda et al '030, Ogino et al and Schnitzler require that the expanded graphite particles be made into sheets for further use. Not the present invention. According to the present invention, the expanded particles are used to surround the fibers and are attached to the fibers by an adhesive. The result is the braided yarns shown in Fig. 2 . A plurality of these braided yarns are braided to form the string in Fig. 3.

The configuration shown in Fig. 3 possesses a synergistic action of the reinforcing fiber yarns and the expanded graphite adhered to the fiber yarns by an adhesive producing a great compression-restoring force, an excellent sealing property, toughness and an excellent sealing property. See page 3, lines 20-24 of the specification.

Enclosure B shows the formation of the sheets from the compression of the expanded graphite flakes and then the assembly of two sheets with fibers therebetween. This is not the same as taking individual expanded graphite particles and surrounding fiber yarns and adhering the expanded graphite particles to the fiber yarns with an adhesive.

Enclosure C shows a flow diagram illustrating the different steps in making the packing according to Ueda '030, Ogino et al and Schnitzler. The formations shown are discussed in the background portion of the specification of this application, as are the disadvantages.

(3)

Claim 2 patentably distinguishes over Ueda et al when considered with Ogino et al

The Examiner suggests (Paper No. 17) that Ueda et al '030 "discloses all features including the use of expanded graphite." Applicant/Appellant disagrees. Ueda et al '030 discloses a single fiber 2 sandwiched between sheets 1 all of which is covered with the net 4" (see Fig. 7). Contrast this with the feature of the present invention shown in Fig. 2, which discloses a plurality of fibers embedded in expanded graphite and held there with adhesive. The fiber yarns 40 are part of the internal reinforcement of the braiding yarn 4. The expanded graphite may be a sheet of expanded graphite, but it does not have to be such. It could be particles which surround the fibers and are held in contact with the fibers by the adhesive. The fiber yarn 40 according to the present invention is not the same as the fiber 2 of Ueda et al '030.

1st answer
pg 5
Identical
to argument
in 1st brief
(pg 5)

Ueda et al '030, then, lacks a proper fiber to meet the fiber yarn defined in claim

2.

Ogino et al lacks the teaching needed when combined with Ueda et al '030 to reform the fiber 2 and convert it to the fiber yarn 40 according to the present invention. The Examiner admits as much by relying on Ogino et al for a teaching of using adhesive for adhering "fibers.....laminated with expanded graphite sheets...." The Examiner does not suggest that the "fiber 2" of Ueda et al '030 is converted to the fiber yarn 40 of the present invention when the person skilled in the art considers both Ueda et al '030 and Ogino et al. Moreover, Ueda et al '030 discloses braiding, whereas Ogino et al does not. There is no common link between the teachings offered in both references. We must accept references as we find them and not stretch them unrealistically. In Ogino et al the packing is formed into a ring-like compact by compression

Same argument
Repeat
reply in
1st answer

molding (see Column 3, lines 61-64 of Ogino et al). Compression molding is known in the art as "mold packing." One would not expect one of ordinary skill in the art to borrow a teaching from the "mold packing" art when braiding is intended. This leaves Ueda et al '030 lacking as the fiber disclosed therein is, as noted above, different from that of claim 2.

In 1983, the Federal Circuit stated in *W. L. Gore and Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303 that:

To imbue one of ordinary skill in the art with knowledge of the invention....when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

This teaching of the Federal Circuit applies here as well. Fiber reinforcement is introduced by Ueda et al '030, but the reinforcement is external and not internal as is claimed in claim 2. To suggest that internal reinforcement is taught is to "imbue one of ordinary skill in the art with knowledge" that they do not possess, and this is impermissible under 35 USC 103.

The examiner refers us to Fig. 7 and 8 of Ueda et al '030 in the Office Action of June 6, 2002 and suggests that "the graphite surrounds the fiber yarns 2 when the threads 4" are braided together." Again Applicant/Appellant must disagree. In discussing Fig. 8, Ueda '030 states, column 3, lines 10-12, that it shows "a cord-like packing formed by square braiding eight knitting threads by using the packing material in Fig. 7." Accordingly, we must view Fig. 7 to see whether the "graphite surrounds the fiber yarns 2 when the threads 4" are braided together." When viewing Fig. 7 we do not see the fibers 2 "surrounded" by the graphite sheets 1. Instead we see that the graphite sheets engage the fibers 2 at best along arc segments of the fiber 2 outer

Ex
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surround
i.e. by deflection

surface. See Enclosure D, which is illustrated to an enlarged scale for ease of visualizing the actual occurrence. According to claim 2, the adhesive surrounds the reinforcing fiber yarns. This is a very clear distinction which differentiates claim 2 over Ueda '030, and Ogino et al as well. See, *In re Wright*, 6 USPQ2d 1959 (Fed. Cir. 1988). In this case, the Federal Circuit instructed us that:

The determination of whether a novel structure is or is not 'obvious' requires cognizance of the *properties* of that structure and the problems which it solves... (emphasis added)

Why would the person of ordinary skill in the relevant art use sheets to surround a cylindrical fiber? This question cannot be answered from anything found in Ueda '030 which would provide, it is respectfully submitted, a basis for applying 35 USC 103 against claim 2.

(4)

Claim 2 patentably distinguishes over Case when considered with Schnitzler

In Case the fibers 18 and 19 are not like the fibers 40 of claim 2, nor are the strands 17 like the braiding yarns of claim 2; and Schnitzler cannot, as Ogino et al could not for Ueda '030, provide the structure of Case with the necessary conformity so that they are alike.

The Federal Circuit has reminded us in *In re Oetiker*, 24 USPQ 2d 1443

(1992) that:

There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge cannot come from the applicant's invention itself.

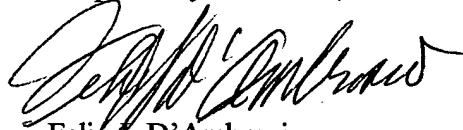
SUMMARY

Claim 2 defines a packing with several distinctive features not found in the art of record. It defines an internally reinforced braiding yarn, which include reinforcing fiber yarns held together by expanded graphite integrally bonded to the reinforcing fiber yarns with an adhesive.

The applied references lack a teaching of the precisely defined internally reinforced braiding yarns and the reinforcing fiber yarns with an adhesive which surrounds them.

Accordingly, the Examiner's final rejections should be reversed and the case remanded to the Examiner with a finding that claim 2 does in fact patentably distinguish over the references cited and applied, and as noted in the Response filed on April 29, 2002, the inventor here is one of the co-inventors of the invention disclosed and claimed in Ueda '030 and is prepared to submit an affidavit or declaration to the effect that the graphite sheets in Fig. 8 do not surround the fibers..

Respectfully submitted,



Felix J. D'Ambrosio
Reg. No. 25,721

February 6, 2003

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APPENDIX

2. A packing, comprising:

a plurality of internally reinforced braiding yarns;

each of said internally reinforced braiding yarns including a plurality of longitudinally arranged, spaced parallel reinforcing fiber yarns each having a surface which surface includes an adhesive, said internally reinforced braiding yarns being held together by expanded graphite integrally bonded to and surrounding said reinforcing fiber yarns with said adhesive, and said plurality of said internally reinforced braiding yarns being braided together to produce a packing string.



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AP 4
3600

In re Application of

Takahisa Ueda

Appln. No. : 08/581,050

Filed : December 27, 1995

For: PACKING

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BRIEF ON APPEAL (3 COPIES)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Transmitted herewith are three (3) copies of a Brief on Appeal in the above-identified application.

1. ☐ An Oral Hearing is requested.
2. ☐ An Oral Hearing is requested on _____.
3. ☐ An extension of time for filing the Brief on Appeal
☐ is hereby requested.
☐ was requested on _____.
4. ☐ A Verified Statement under 37 CFR 1.9 and 1.27
☐ is enclosed.
☐ is of record in this application.


The fee is calculated as follows:

	Large Entity	Small Entity	Amount
Filing Brief on Appeal	\$320.00	\$160.00	\$320.00
Request for Oral Hearing	280.00	140.00	
Request for Extension of Time for Filing Brief			
<input type="checkbox"/> 1 month	110.00	55.00	
<input type="checkbox"/> 2 months	400.00	195.00	
<input type="checkbox"/> 3 months	890.00	445.00	
<input type="checkbox"/> 4 months	1,390.00	695.00	
<input type="checkbox"/> 5 months	1,890.00	945.00	

TOTAL DUE: \$320.00

5. () No fee required.
6. () A check in the amount of \$ _____ is enclosed. (Check No. _____)
7. (x) Please charge Deposit Account No. 10-1213 in the amount of \$ 320.00. A duplicate of this sheet is enclosed.
8. (X) The Commissioner is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. 10-1213. A duplicate of this sheet is enclosed.
- (X) Any patent application processing fees under 37 CFR 1.17.
- () The Issue Fee set in 37 CFR 1.18 at or before mailing of the Notice of Allowance, pursuant to 37 CFR 1.311(b).
- (X) Any filing fees under 37 CFR 1.16 for presentation of extra claims.

Respectfully submitted,



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February 6, 2003

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